Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~An interferometry method,~~ Apparatus comprising:

means for directing a measurement wavefront to reflect from a measurement surface and a reference wavefront to reflect from a reference surface, the measurement and reference wavefronts being derived from a common light source;

means for directing the reflected measurement and reference wavefronts to overlap with one another and form an interference pattern, wherein paths for the measurement and reference wavefronts define an optical measurement surface corresponding to a theoretical test surface that would reflect the measurement wavefront to produce a constant optical path length difference between the measurement and reference wavefronts; and

means for varying the radius of curvature of a locally spherical portion of the optical measurement surface to contact a conical portion of the measurement surface, and detecting the interference pattern as a function of the radius of curvature.

Claims 2-5 are Cancelled.

6. (Currently Amended) ~~An interferometry method,~~ Apparatus comprising:

means for directing a measurement wavefront to reflect from a measurement surface and a reference wavefront to reflect from a reference surface, the measurement and reference wavefronts being derived from a common light source having a coherence length;

means for directing the reflected measurement and reference wavefronts to overlap with one another and form an interference pattern, wherein paths for the measurement and reference

wavefronts define an optical measurement surface corresponding to a theoretical test surface that would reflect the measurement wavefront to produce a constant optical path length difference between the measurement and reference wavefronts; and

means for varying the radius of curvature of a locally spherical portion of the optical measurement surface to contact the measurement surface, and detecting the interference pattern as a function of the radius of curvature, wherein the radius of curvature is varied over a distance greater than the coherence length of the light source.

Claims 7-93 are Cancelled.